

IN THE CLAIMS

Please cancel Claims 3 and 20 without prejudice and without disclaimer of subject matter.

Please amend Claims 1, 18, 38 and 43 to read as follows (a version marked to show the changes is submitted herewith):

*Sup  
Ent  
Cont*  
*C1*

1. (Thrice Amended) A matrix substrate having plural switching elements provided in matrix corresponding to intersecting points of scanning lines and signal lines, plural picture element electrodes connected to the switching elements, and horizontal circuits and vertical circuits for inputting the signals to the switching elements, the matrix substrate comprising:

a horizontal scanning circuit for sampling a picture data based on digital picture signals;

a latch circuit for memorizing the data synchronously with output from the horizontal scanning circuit;

a D/A converter for converting an output from the latch circuit into analog signals;

Sub  
E1  
plural signal transfer switches provided  
between the D/A converter and the signal lines;

a selection circuit for selecting at least one  
of the signal transfer switches;

circuitry which inputs signal-polarity  
inverting signals together with the picture data, and which  
inverts the polarity of the analog signal from the D/A  
converter; and

C1  
cont.  
a buffer disposed between said D/A converter  
and said selection circuit, which stores the analog signal of  
inverted polarity from the D/A converter,

wherein a number M of said D/A converters is  
less than a number N of said switching elements arranged in a  
horizontal direction, and analog signals are sequentially  
inputted from particular ones of said M D/A converters to N/M  
plural switching elements arranged in a horizontal direction.

Sub  
D1  
C2  
cont.  
18. (Twice Amended) A liquid crystal device  
comprising a matrix substrate having plural switching  
elements provided in matrix corresponding to intersecting  
points of scanning lines and signal lines, plural picture  
element electrodes connected to the switching elements, and  
horizontal circuits and vertical circuits for inputting the

54B  
D1

signals to the switching elements; a counter substrate opposing to the matrix substrate; and a liquid crystal material placed between the matrix substrate and the counter substrate, the matrix substrate comprising:

a horizontal scanning circuit for sampling a picture data based on digital picture signals;

a latch circuit for memorizing the data synchronously with output from the horizontal scanning circuit;

a D/A converter for converting the output from the latch circuit into analog signals;

plural signal transfer switches connected to output of the D/A converter;

a selection circuit for selecting at least one of the signal transfer switches; and

means for inputting signal-polarity inverting signals together with the picture data, and for inverting the polarity of the analog output of the D/A converter,

wherein a number M of said D/A converters is less than a number N of said switching elements arranged in a horizontal direction, and analog signals are sequentially inputted from particular ones of said M D/A converters to N/M plural switching elements arranged in a horizontal direction.

38. (Amended) A matrix substrate having plural switching elements provided in matrix corresponding to intersecting points of scanning lines and signal lines, plural picture element electrodes connected to the switching elements, a horizontal circuit for inputting the signals to the switching elements, and a vertical circuit for driving said scanning lines, the matrix substrate comprising:

a horizontal scanning circuit for sampling a picture data based on digital picture signals;

a latch circuit for memorizing the data synchronously with output from the horizontal scanning circuit;

a D/A converter for converting the output from the latch circuit into analog signals; and

polarity inversion means for inputting, together with the picture data, a signal polarity inversion signal and for inverting a polarity of the analog output of said D/A converter according to the signal polarity inversion signal,

wherein a number M of said D/A converters is less than a number N of said switching elements arranged in a horizontal direction, and analog signals are sequentially

C3  
CONF.  
SUBD27  
inputted from particular ones of said M D/A converters to N/M  
plural switching elements arranged in a horizontal direction.

---

SUBD37  
43. (Amended) A liquid crystal apparatus,  
comprising:

a matrix substrate having plural switching  
elements provided in matrix corresponding to intersecting  
points of scanning lines and signal lines, plural picture  
element electrodes connected to the switching elements, a  
horizontal circuit for inputting the signals to the switching  
elements, and a vertical circuit for driving the signal  
lines;

C4  
an opposite substrate opposing said matrix  
substrate; and

a liquid crystal material between said matrix  
substrate and said opposite substrate,

said apparatus further comprising a horizontal  
scanning circuit for sampling a picture data based on digital  
picture signals, a latch circuit for memorizing the data  
synchronously with output from the horizontal scanning  
circuit, a D/A converter for converting the output from the  
latch circuit into analog signals, and means for inputting a  
signal polarity inversion signal together with the picture